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they have really lost, and always endeavour to profit by the opportunity to get more, and then they are easily found out."

"There are no Life Assurance Companies in Sweden, your English Companies offering greater securities than we can hope to afford. The only institution of that kind is an 'Annuity and Capital Assurance Establishment' (Ränte och kapital försäkrings anstalt), which was formed a year ago for the poorer classes. I hope that this useful institution will do much good in future. It is in very good hands."

Table showing the Progress of the Swedish Fire Insurance Companies.

Year.	The Stockholm's City Assurance Company for Buildings.		The Stockholm's City Mutual Assurance Society for Goods and Furniture.		The General Mutual Assurance Society for Buildings in the Towns.		The Mutual Assurance Society for Goods and Furniture in the Towns.	
	Liabilities.	Losses.	Liabilities.	Losses.	Liabilities.	Losses.	Liabilities.	Losses.
	£	£	£	£	£	£	£	£
1842	2,545,400	11,912						
1843	2,626,706	1,526	..	..	..	..	1,866,447	1,233
1844	2,687,096	1,533	..	..	..	..	2,293,960	5,910
1845	2,757,577	96	900,450	122	2,285,544	6,034	2,350,193	6,970
1846	2,806,058	1,198	1,068,958	69	2,349,911	18,358	2,185,372	14,422
1847	2,873,189	3,813	1,420,383	740	2,429,900	6,875	1,980,976	7,488
1848	2,943,283	926	1,664,025	798	2,523,173	1,562	1,765,988	4,147
1849	3,010,460	367	2,026,592	726	2,610,755	21,254	1,890,244	15,210
1850	3,091,719	1,720	2,151,733	6,048	2,724,149	2,797	1,780,195	2,680
1851	..	..	2,049,692	164				
Aver.	2,815,721	2,566	1,611,690	1,238	2,487,239	9,480	2,014,172	4,838
	Capital on 31 Dec., 1850, £333,636.		Capital on 30 Sept., 1851, £8,302.		Capital on 31 Dec., 1850, £44,907.		The contributions for these Years have been on the average— 1st CLASS (in houses of stone, with staircases of stone), ¼ per Cent. 2nd CLASS (ditto, with stair- cases of wood), ¼ per Cent. 3rd CLASS (in houses of wood), 2-5ths per Cent.	

CORRESPONDENCE.

ON A METHOD OF CHECKING ANNUITY TABLES AT DIFFERENT RATES OF INTEREST BY HELP OF ONE ANOTHER.

To the Editor of the Assurance Magazine.

DEAR SIR,—The following rule for checking Annuity Tables at different Rates of Interest by help of one another, was framed by the late Professor Wallace, of Edinburgh, and was used by him in trying some calculations made for a Life Office in 1833. I found it among the papers of my deceased friend Mr. Galloway, Mr. Wallace's son-in-law. Wallace has proved and applied one case of his rule, namely, that in which four tables are employed, at the rates of 3, 4, 5, and 6 per cent. Anyone who investigates the rule will easily see how to apply it in any cases, be the

number of tables and the rates of interest what they may. The rule, in Wallace's words, is as follows:—

“Let A, B, C, D be the values of an annuity on a given life at 3, 4, 5, 6 per cent.; and A', B', C', D' the values on a life three years older. Find the values of a'' and b'' , also α'' and β'' , from these formulæ.

$1.03^2 A = a$	$\frac{1 + A'}{1.03} = \alpha$	
$a - b = a'$	$\alpha - \beta = \alpha'$	
$1.04^2 B = b$	$\frac{1 + B'}{1.04} = \beta$	$\alpha' - \beta' = \alpha''$
$a' - b' = a''$		
$b - c = b'$	$\beta - \gamma = \beta'$	
$1.05^2 C = c$	$\frac{1 + C'}{1.05} = \gamma$	$\beta' - \gamma' = \beta''$
$b' - c' = b''$		
$c - d = c'$	$\gamma - \delta = \gamma'$	
$1.06^2 D = d$	$\frac{1 + D'}{1.06} = \delta$	

Then, if the calculations have been rightly performed,

$$\frac{a''}{b''} = \frac{\alpha''}{\beta''}.$$

If only two tables were employed, the rule would be as follows:—

Let A and B be the annuities at a given age, A' and B' those at *one* year older, v and w the present values of £1 due in one year. Then

$$\frac{A(1+B')}{B(1+A')} = \frac{v}{w}.$$

I am not aware that these rules have been given. In the event of their having occurred to some one else, I may state that Wallace communicated them to Mr. Galloway, and thereby secured his right, in October, 1834, as appears by a memorandum.

I remain, dear Sir, yours faithfully,

A. DE MORGAN.

University College, London,
May 10, 1852.

ON A METHOD OF OBTAINING FROM A TABLE OF *ASSUMED* “WHOLE LIFE” PREMIUMS THE CORRESPONDING TABLE OF MORTALITY.

To the Editors of the Assurance Magazine.

GENTLEMEN,—Before proceeding further, it may be well to explain the object which the method about to be described has in view.

In the present day, when so many new classes of risks are undertaken, even by offices of the highest standing, it will often be of importance to be able to determine the “short period,” or “definite payments,” &c. premium, which fairly corresponds to an *assumed* “whole life” premium. The cases of “hazardous” risks, and of extras for “foreign residence,” are instances in point, as well as all the various classes of assurances involving